

What is claimed is:

1. A storage unit, comprising:

a storage device to store data;

a storage device control section to control the writing/reading of the data to/from said storage device;

a channel control section to control an interface with a host machine;

a cache memory to temporarily store the data written/read between said host machine and said storage device;

a first power source to supply, to said cache memory, a voltage in a normal operation mode in which the data is written to/read from said cache memory; and

a second power source to supply, to said cache memory, a voltage in a backup operation mode in which the data stored in said cache memory is retained.

2. The storage unit according to claim 1,

wherein each of said first and second power sources further includes:

a function to change its own output voltage in response to a command from the outside of a power source, and

control means to switch a feeding path of said first power source to said cache memory and a feeding path of said second power source to said cache memory, wherein, in switching the control means, the control means switches the feeding paths to said cache memory by controlling such a

voltage value that an output voltage of one selected from said second and first power sources is set higher than that of the other unselected from said second and first power sources.

3. The storage unit according to claim 2,

wherein said control means changes the output voltage of said first power source from a first voltage value to a second voltage value lower than said first voltage value in switching from said feeding path of said first power source to said feeding path of said second power source.

4. The storage unit according to claim 2,

wherein said control means changes the output voltage of said second power source from a third voltage value to a fourth voltage value lower than said third voltage value in switching from said feeding path of said second power source to said feeding path of said first power source.

5. The storage unit according to claim 2,

wherein said control means changes the output voltage of said second power source from a fifth voltage value to a sixth voltage value lower than said fifth voltage value in switching from said feeding path of said first power source to said feeding path of said second power source.

6. The storage unit according to claim 2,

wherein said control means changes the output voltage of said first power source from a seventh voltage value to an eighth voltage value lower than said seventh voltage value in the switching from said feeding path of said

second power source to said feeding path of said first power source.

7. The storage unit according to claim 1, further comprising:

first connection means connected to an input side of said first power source,

wherein said first connection means is turned off when power is supplied from said second power source.

8. The storage unit according to claim 1, further comprising:

second connection means connected between an output terminal of said second power source and a feeding terminal of said cache memory; and

monitoring means to monitor the output voltage of said second power source,

wherein said second connection means is turned off when power is supplied from said first power source and the output voltage of said second power source is monitored by said monitoring means.

9. The storage unit according to claim 1,

wherein said first power source is composed of a fast-response DC-DC converter, and

said second power source is composed of a highly power-efficient DC-DC converter.

10. The storage unit according to claim 1,

wherein a plurality of said storage devices are provided, and said storage devices are arrayed so as to

provide redundancy.